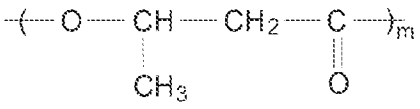
AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for preparing a ~~PHA~~poly(3-hydroxyalkanoate) ("PHA") block copolymer having orientation-induced rubber-elasticity and temperature-sensitive shape memory effects ~~by biosynthesis using microorganisms~~,

wherein the PHA block copolymer comprises:

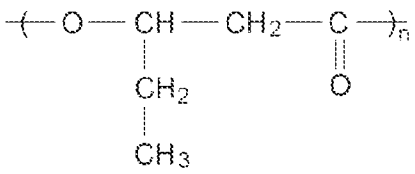
a plurality of 3-hydroxybutyrate (3HB) blocks of Formula 1 as a repeating unit:



(Formula 1)

wherein m is not less than 2; and

a plurality of 3-hydroxyvalerate (3HV) blocks of Formula 2 as a repeating unit:



(Formula 2)

wherein n is not less than 2; and

~~the PHA block copolymer is prepared using saturated and/or unsaturated carboxylic acid as a carbon source and a *Pseudomonas* sp. HJ-2 strain (Accession No. KCTC 0406 BP).~~

wherein the PHA block copolymer is prepared by the method comprising the following steps:

(a) biosynthesizing the PHA block copolymer by culturing a *Pseudomonas* sp. HJ-2 strain (Accession No. KCTC 040-6 BP) using saturated and/or unsaturated carboxylic acid as a carbon source;

(b) extracting the PHA block copolymer by crushing the culture;

(c) heating the PHA block copolymer to a temperature ranging from a melting point to thermal decomposition temperature thereof, thereby preparing a permanently deformed particular shaped PHA block copolymer; and

(d) subjected the permanently deformed particular shaped PHA block copolymer to a constant external force at near room temperature for a predetermined period of time, thereby forming a PHA block copolymer having a temporary shape.

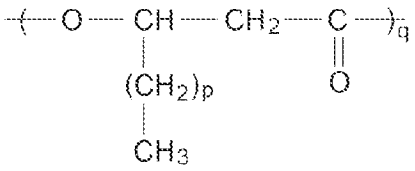
2. (Canceled)

3. (Currently Amended) The method for preparing the PHA block copolymer according to claim ~~2~~1, wherein the temporarily shaped PHA block copolymer ~~material~~ is rapidly recovered to its original state of the permanently shaped PHA block copolymer ~~material~~ by heating the temporarily shaped PHA block copolymer ~~material~~ to a temperature ranging from a glass transition temperature to melting point thereof.

4. (Previously Presented) The method for preparing the PHA block copolymer according to claim 1, wherein the content of 3HV in the total monomers of the copolymer is within the range of 10 to 90 mol%.

5. (Currently Amended) The method for preparing the PHA block copolymer according to claim 1, wherein the molecular weight of the copolymer is ~~approximately~~ in the range of several tens of thousands to several million g/mol~~s~~.

6. (Previously Presented) The method for preparing the PHA block copolymer according to claim 1, wherein the copolymer further comprises not more than 70 mol% of a hydroxy acid repeating group of Formula 3, based on the total polymer:



(Formula 3)

wherein p and q are independently not less than 2.

7-8. (Canceled)

9. (Previously Presented) The method for preparing the PHA block copolymer according to claim 1, wherein the PHA block copolymer is prepared by culturing the *Pseudomonas* sp. HJ-2 strain with supply of heptanoic acid as a sole carbon source.

10-19. (Cancelled)